Response to Comments on the Draft
Five-Year Transmission Research and Development Plan

On June 18, 2003, the Public Interest Energy Research Program (PIER) Energy System Integration Team (ESI) posted a **Staff Draft Five-Year Transmission Research and Development (R&D) Plan**. Comments were solicited and received from a range of companies, groups, or individuals that include:

- California Independent System Operator
- California Investor-Owned Utilities (IOUs)
  - Pacific Gas and Electric
  - San Diego Gas and Electric
  - Southern California Edison
- Electric Power Research Institute and Electricity Innovation Institute (EPRI/E2I)
- The Center for Energy Efficiency and Renewable Technologies (CEERT)
- E Solutions Consulting
- The Valley Group, Inc.
- The California Seismic Safety Commission
- Jim Wight, Civil/Structural Engineering Manager, San Diego Gas & Electric
- Nicholas Garloff, Expanding Edge, LLC
- Snuller Price, Energy and Environmental Economics, Inc. (E3)

We would like to thank all companies and individuals for their comments and suggestions and their participation in the process to develop this plan over the past nine months.

After carefully considering all comments and consulting with the Energy Commission Research and Development Committee, the following changes and recommendations will be implemented as ESI continues to move forward with the development and implementation of the PIER **Five-Year Transmission R&D Plan**. Additionally, a bridge has been established for the first year activities.

1. **Environmental Considerations.** The three California IOUs and E2I/ EPRI emphasized the importance of studying the impacts of electric transmission on public health, safety and the environment. In response to these recommendations, a specific individual environmental research initiative has been added in Focus Area II: Capacity Additions. Additionally, $500,000 has been

specifically designated in the transmission research budget to fund research projects that focus on environmental issues associated with transmission infrastructure and right-of-ways.

2. **Incorporate Renewables into the Transmission Planning Process.** CEERT suggested that PIER transmission research could help support the development or upgrades of transmission needed to interconnect and deliver new renewable generation by developing the planning tools necessary to evaluate the role and benefits of renewable resources in the transmission planning process. Specifically, they recommend that in Focus Area IV: Planning Tools, that a reference to the valuation of renewable resources be explicitly included in the goals of this initiative. We agree and have included renewable resource valuation in Focus Area IV: Planning Tools.

3. **Research Priorities.** The CAISO, IOUs, E2I/EPRI, CEERT, The Valley Group, E-Solutions, E3, Jim Wight, and Nicholas Garloff all provided suggestions for research projects and/or priority recommendations for research initiatives.
When our Program Administrator (PA) is hired and our Policy Advisory Committee (PAC) organized, these suggestions will be passed on to these entities to be further evaluated. We will look specifically to our PAC for guidance and input on how these research initiatives should be prioritized and developed.

   Aware of the urgency and need to get critical transmission research started as soon as possible, we have begun work on the development of the two "first priority" research initiatives identified in the research plan. Staff is initiating outreach to stakeholders to assist with the identification of the research questions and objectives relevant to both of these initiatives. For the initiative focusing on the use of actual system conditions in place of worst case condition to increase thermal and stability limits, staff expects to have a draft solicitation package completed in December.

4. **Transmission R&D Budget for 2003 - 2004.** The following table contains the details of the PIER budget for transmission for 2003 through June of 2004.

PIER Transmission R&D Budget

Research	2003-2004
Transmission Capacity Expansion Planning Tools and Approaches	$1.0 Million
Use Actual System Conditions in Place of Worst Case Scenario (to increase thermal & stability limits)	$2.0 Million
Research Plan Initiatives Prioritized by the Policy Advisory Committee	$2.0 Million
Environmental Research/Transmission Rights-of-Way *This research will be administered by PIER Environmental Energy Research Program	$0.5 Million
Real-Time Monitoring and System Control	$0.5 Million
Total	**$6.0 Million**

5. **Stakeholder Participation.** In their comments, the IOUs suggested that initiative selection, implementation and program planning have occurred with little IOU participation. Staff will endeavor to improve this perception. However, to clarify our process, staff has provided various forums to include all stakeholders in the development of the transmission research plan. We held a

Round Table to discuss the proposed process. Information was solicited from all stakeholders during the development of two consultant reports that formed the basis for recommendations for research initiatives in the Draft Five-Year Transmission R&D Plan. See reports and plan at: http://www.energy.ca.gov/pier/strat/strat_research_trans6.html

On March 12, 2003, a Research and Development Committee Workshop was held to present the draft results of the report and receive verbal and written comments from stakeholders and the public. These comments were used to develop the draft research plan which was then posted on the California Energy Commission website for comment. Throughout the process, staff has made itself available to meet with any stakeholder to discuss the development and implementation of the research plan.

Staff would also like to clarify that the research plan focuses on high level research initiatives. It will require work and considerable input before specific projects will emerge. We will look to stakeholders to help the program develop and identify the critical public interest research projects the program will fund.

6. **Implementation Comments.** During discussions and meetings on the development of the research plan, staff also asked stakeholders to comment on a variety of options PIER was considering to implement the research plan. Many useful suggestions were received and incorporated into the final implementation strategy PIER is currently pursuing to launch the program. We will have a Program Administrator and set up a Policy Advisory Committee. This will provide PIER with needed infrastructure support to vigorously seek input and participation of all stakeholders who have the experience, responsibility and an interest in the development, operation and maintenance of California's electric transmission infrastructure.

7. **Relationship of Public Interest and Regulated R&D.** The California IOUs recommended that Section 4, Relationship between PIER and Regulated Utility R&D should be "deleted in its entirety." The section has been retained to clarify a distinction between public interest, competitive and regulated research, as articulated in AB 1890 (PIER's enabling legislation) and various CPUC proceedings.
   Also, the Commission wants to clarify a misconception. The Energy Commission does not have a predisposition against the utilities participating in the PIER program. The Commission has funded many utility-sponsored projects providing expertise, test facilities and/or demonstration sites. Our objective with the transmission research program is to foster and develop their collaboration on public interest research.